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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/018,976

03/14/2002

Manfred Kogler

1406/34

3027

25297 7590 07/22/2008
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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

07/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/018,976	Applicant(s) KOGLER, MANFRED	
	Examiner Qutbuddin Ghulamali	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to remarks/amendment filed 4/7/2008.
2. The claim objection of claim 1, is hereby withdrawn, in light of the amendment filed 4/7/2008,

Response to Remarks

3. Applicant's arguments filed 4/7/2008 have been fully considered but they are not persuasive. Applicant remarks that Anne does not disclose signal identification configured to identify a type of modulation and transmission speed of a transmitted PCM signal.

The examiner disagrees and provides the following explanation:

Applicant's attention is drawn to Anne, col. 4, lines 50-65 wherein Anne discloses a signal identification device configured to identify a type of modulation of a transmitted PCM signal. Anne further discloses in col. 15, lines 45-67 and col. 16, lines 1-25, wherein DSP 220 where sample data stream generally enters and exits, I/O port 420 represents data flowing between the DSP 220 and CODEC 216, fig. 4. Fig. 4 also shows DSP provide means that preferably includes waveform for pulse position modulation (PPM) 404, quadrature amplitude modulation (QAM) 408, and quadrature phase shift keying (QPSK) 412. Other waveform samples 416 may be included, as desired, the DSP 220 preferably constructs transmitted waveforms by reading samples from the appropriate location in the lookup table 400. Anne also discloses that the DSP

220 further includes routines for **selecting a modulation** technique (block 432), modulating and filtering outgoing data (block 428), selecting a demodulation technique (block 436), and demodulating and filtering incoming data (block 440), the modulation selection routine 432 determines the appropriate modulation technique through communication with the host processor 106 in computer system 100 or through any other manner as desired, once the modulation technique is **selected, the modulation** selection routine 432 determines which region in the lookup table 400 holds the waveform samples for the **selected modulation** scheme (col. 16, lines 11-40). The modulation and filtering routine 428 then creates an outgoing digital signal based on data received through the MAC port 424 by selecting waveform samples from the chosen region in the lookup table 424 (the selected type of modulation than implicitly imply transmission speed associated with modulation. The modulation and filtering routine 428 optionally **bandpass filters** the modulated data prior to transmitting the outgoing digital signal through the **CODEC** I/O buffer 420. The **bandpass** filtering preferably attenuates frequencies below approximately 4 megahertz (MHz) and above 8 MHz, although any desired cutoff frequencies or other **filter** characteristics may be implemented as needed. Anne shows that to transmit signals using pulse position modulation, the DSP 220 generates pulse waveforms that are delayed according to the transmitted data values being, in a preferred embodiment, the DSP 220 generates each pulse waveform by reading samples corresponding to the transmitted data value from the lookup table. Under alternative embodiments, the DSP 220 may modulate a carrier signal in real time, using conventional methods such as multiplication and phase

shifting. Anne further discloses that a carrier detector circuit is included that monitors the incoming digital signal, asserting a carrier detect (CD) signal to a high logic level during the carrier pulses. The **filter** bank 204 includes **filters** for signals received from the POTS line and **filters** for signals received from the **CODEC** 216 via the output amplifier 212. The **filters** 204 preferably comprise "brick wall" **bandpass filters** that pass the frequency band over which the network **modem** 130 communicates. In a preferred embodiment, this frequency band ranges from approximately 2 MHz to 10 MHz, although any frequency band is acceptable. These frequencies ensure compatibility with existing phone networking systems and minimize interference within the lower frequency bands occupied by basic telephone and DSL services, without requiring excessive **filter** complexity, a 3rd to 5th order Chebyshev or elliptical **filter** can provide adequate out of band rejection, although any suitable filtering scheme can be implemented, as disclosed in Anne, in a preferred embodiment, the **filters** may be tunable if desired (col. 16, lines 36-64; col. 21, lines 43-60). The examiner understands that the disclosure as provided herein addresses the claim limitations in support of the claim rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Anne et al (US Patent 6,744,812).

Regarding claim 1, Anne discloses a codec circuit, a programmable (tunable) digital bandpass filter, for providing filter characteristics (col. 16, lines 11-24, 35-40) of the codec circuit to a transmitted PCM signal (col. 4, lines 50-65), a signal identification device configured to identify a type of modulation and transmission speed of a transmitted PCM signal and configured to set filter coefficients for the at least one programmable digital high pass filter and the at least one programmable digital low pass filter based on the identified modulation type and transmission speed (or transmission rate) of the transmitted signal (for example in a V.90 the sample rate preferably is 8 kHz) (col. 5, lines 1-20, 25-40; col. 11, lines 1-15; col. 16, lines 11-24, 35-40; col. 21, lines 11-15). Anne however, does not show use of filter labels as low pass and high pass filter, however, as understood by the examiner, and as illustrated in fig. 2, (see also col. 21, lines 11-24) the filter bank (204) includes filters, at least one digital high pass filter and at least one digital low pass filter and regarded as connected in series electrically and as disclosed by Anne these filters may be tunable (or programmable) if desired (col. 10, lines 66-67; col. 11, lines 1-15; col. 21, lines 12-24) as would be obvious to a person of skill in the art at the time the invention was made to utilize, to arrive at the same or similar results, for achieving the desired filter characteristics once the modulation mode or type is recognized because once the modulation technique is selected, the modulation selection routine 432 determines which region in the lookup table 400 holds the waveform samples for the selected modulation scheme, the

modulation and filtering routine 428 then creates an outgoing digital signal based on data received through the mac port 424 by selecting waveform samples and bandpass filters the modulated data prior to transmitting through the codec).

Regarding claim 2, Anne discloses setting filter coefficients are stored in coefficient memory devices, which are associated with the programmable digital high-pass and low-pass filters (col. 10, lines 8-54).

Regarding claim 3, Chung discloses the memory devices can be in the form of a random access memory (RAM) (col. 10, lines 24-29).

Regarding claim 4, Chung discloses memory devices are connected via coefficient setting lines to the signal identification device (fig. 4, elements 220, 400, 424).

Regarding claim 5, Anne discloses programmable digital filters can be set to a 3rd to 5th order and if desired can be designed to a seventh-order, since Anne discloses that these filters are tunable (col. 21, lines 5-15).

Regarding claims 6, Anne discloses upper and lower signal transmission cut-off frequencies can be set by means of filter settings (shows filter roll-off below 4MHz and above 8 MHz (col. 16, lines 21-24, 35-40).

Regarding claims 7 and 8, Anne discloses lower and upper signal transmission cut-off frequency can be set as part of the filter characteristic desired in bandpass filtering (col. 21, lines 5-24).

As to claim 9, Anne discloses filter to compensate for ripple in the passband filter (col. 21, lines 24-30; col. 22, lines 6-12).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutbuddin Ghulamali whose telephone number is (571)-272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.

July 15, 2008.

/Chieh M Fan/

Supervisory Patent Examiner, Art Unit 2611